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Ralf Wnuk

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ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P.

1300 19TH STREET, N.W.

SUITE 600

WASHINGTON,, DC 20036

EXAMINER

ANDERSON, DENISE R

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,302	Applicant(s) WNUK, RALF	
	Examiner Denise R. Anderson	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1797

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

2. The drawings were received on August 12, 2009. These drawings are acceptable.

Claim Objections

3. Claims 5 and 9 were cancelled. The previous objections are withdrawn.

Specification

4. The amendment filed August 12, 2009 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows. Applicant changed "the free wheeling device 56" to "automatic clutch 56." Original Specification, ¶ 24, line 5; Substitute Specification, p. 7, lines 19-20. An "automatic clutch" is a narrower term than the original "free wheeling device."
5. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

6. Claims 5, 8, and 9 were cancelled. The previous rejections for indefiniteness are withdrawn.

Art Unit: 1797

7. Claims 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites the following limitation.

*a drive being coupled to said receiving part to rotate said receiving part, including a rod-shaped drive part releasably connecting said first and second end parts and **including a pneumatic motor producing alternating to and fro movements on an output part convertible into a constant drive movement in a drive direction of said drive part by a free wheel device.***

What does the limitation mean that is in bold type? There is no “output part” in either the Original Specification or the Substitute Specification. The drive part in bold-faced type could be either Fig. 1, drive part 52 or Fig. 1, driven part 54. The examiner will interpret the limitation to mean (1) the drive (Fig. 1, drive 34) has a pneumatic motor, as stated in the substitute Specification, p. 4, line 11 – and (2) the drive (Fig. 1, drive 34) is coupled to the free wheel device (Fig. 1, free-wheeling device 56) with a driven part (Fig. 1, driven part 54), in keeping with the Specification’s Fig. 1.

8. Claims 16 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims appear below.

*Claim 16. (new) A filter device according to claim 15 wherein each said filter element comprises a **bar screen tube filter element.***

*Claim 24. (new) A filter device according to claim 22 wherein
each said filter element comprises a **bar screen tube filter element.***

Art Unit: 1797

9. There is no mention of “bar screen tube filter elements” in either the Original Specification or its substitute. The examiner will interpret the limitation to mean a tubular wedge-wire screen filter element. This has support both from the Original Specification and its substitute when it is stated, “The tubular wedge-wire screen filter elements preferably used have support rods.” Original Specification, ¶ 28, lines 1-2; Substitute Specification, p. 8, line 28.

Keying the Claimed Structure to the Prior Art

10. Below is Table 1, with the claimed structure of the original specification keyed to the claimed structure of the substitute specification – and also keyed to the prior art to aid in the patentability analysis to follow.

TABLE 1: KEYING CLAIMED STRUCTURE TO PRIOR ART.		
<i>Claimed Structure in Original Specification</i>	<i>Claimed Structure in Substitute Specification</i>	<i>Prior Art</i>
<i>Filter device</i> , Fig. 1.	<i>Filter device</i> , Fig. 1.	<i>Filter device</i> – Sindorf et al., Fig. 1.
<i>Filter elements</i> (28).	<i>Filter elements</i> – Fig. 1, filter elements 28.	<i>Filter elements</i> – Sindorf et al., Fig. 1, filter insert 12.
<i>Inlet opening</i> (46).	<i>Inlet opening</i> – Fig. 1, inlet opening 46.	<i>Inlet opening</i> – Sindorf et al., Fig. 1, opening between filter insert 12 and disk opening 18.
	<i>Arcuate-shaped recess</i> – Fig. 1, kidney-shaped recess 44.	<i>Arcuate-shaped recess</i> – Sindorf et al., Fig. 1, recess under filter element in filtration mode, i.e. disk opening 18.
	<i>Backwash recess</i> – Fig. 1, opening 48.	<i>Backwash recess</i> – Sindorf et al., Fig. 1, recess under filter element in backwash mode, i.e. disk opening 18.
	<i>Lower free open cross-section</i> – Fig. 1, lower opening cross section 46.	<i>Lower free open cross-section</i> – Sindorf et al., Fig. 1, opening between filter insert 12 and disk opening 18.
<i>Filter housing</i> (10).	<i>Housing</i> – Fig. 1, filter housing 10.	<i>Housing</i> – Sindorf et al., Fig. 1, filter housing 1.
<i>Filter inlet</i> (20).	<i>Fluid inlet</i> – Fig. 1, filter inlet 20.	<i>Fluid inlet</i> – Sindorf et al., Fig. 1, filter liquid inlet 5.
<i>Filter outlet</i> (22).	<i>Fluid outlet</i> – Fig. 1, filter outlet 22.	<i>Fluid outlet</i> – Sindorf et al., Fig. 1, filtrate outlet 6.
<i>Fluid outlet</i> (26).	<i>Backwash fluid outlet</i> – Fig. 1, fluid outlet (26).	<i>Backwash fluid outlet</i> – Sindorf et al., Fig. 1, back washing channel 28.
<i>Edge part</i> (14).		Sindorf et al., Fig. 1, bearing ring 14.

Art Unit: 1797

<i>Other part</i> (12).		Sindorf et al., Fig. 1, header 3 above multi-kant sets 16.
<i>Cavity</i> (60).	<i>Cavity</i> – Fig. 1, cavity 60.	<i>Cavity</i> – Sindorf et al., Fig. 1, chamber 11.
<i>Pivoting device</i> (30).	<i>Pivoting device</i> – Fig. 1, pivoting device 30.	<i>Pivoting device</i> – Sindorf et al., Fig. 1, base section 2 and head section 3.
<i>Pivoting axis</i> (36).	<i>Pivot axis</i> – Fig. 1, pivoting axis 36.	<i>Pivot axis</i> – Sindorf et al., Fig. 1, extends longitudinally along axis 10.
<i>Receiving element</i> (32).	<i>Receiving part</i> – Fig. 1, receiving element 32.	<i>Receiving part</i> – Sindorf et al., Fig. 1, head section 3 and base section 2 above and below the filter insert 12.
<i>End parts</i> (38, 40).	<i>End parts</i> – Fig. 1, end parts 38, 40.	<i>End parts</i> – Sindorf et al., Fig. 1, head 3 and footer 2 that are just above and just below the filter insert 12.
<i>Drive part</i> (52).	<i>Drive part</i> – Fig. 1, rod-like drive part 52.	<i>Drive part</i> – Sindorf et al., Fig. 1, axis 10.
<i>Free-wheeling device</i> (56).	<i>Free-wheel device</i> – Fig. 1, free-wheeling means 56 with free-wheeling sleeve 56a.	<i>Free-wheel device</i> – Sindorf et al., Fig. 1, center part of plate 17 and the coupler between plate 17 and bearing 21.
<i>Drive</i> (34).	<i>Drive</i> – Fig. 1, drive or motor 34.	<i>Drive</i> – Sindorf et al., Fig. 1, rotary drive 4.
<i>Driven part</i> (54).		<i>Driven part</i> – Sindorf et al., Fig. 1, the coupler between plate 17 and bearing 21.
<i>Sealing means</i> (42).	<i>Seal</i> – Fig. 1, sealing means or seal 42.	<i>Seal</i> – Sindorf et al., Fig. 1, “peripheral seal in a cylindrical bearing face 20 of the filter housing 1,” Translation, ¶ 14, line 7.

Claim Rejections - 35 USC § 103
Filter Device Recited in Claims 11-18

11. Claims 11, 12, 14, 15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sindorf et al. (EP0900548A1, Mar. 3, 1999 – Abstract, Patent Publication, Translation).

12. Claim 11 is shown below in italics with the keyed structure from Table 1 underlined.

Claim 11. (new) A filter device, comprising:

a filter housing having an unfiltered fluid inlet, a filtered fluid outlet and a backwash fluid outlet;

Art Unit: 1797

filter elements in said housing receiving fluid flow in one direction for filtration and in an opposite direction for backwashing effective filter surfaces thereof;

a pivoting device mounting said filter elements in said filter housing for sequential rotational movement about a pivot axis between filtration positions in which unfiltered fluid flows from inside to outside through said filter elements and a backwashing position in which filtered fluid flows from outside to inside through said filter elements, said pivot(ing) device having a rotatably mounted receiving part mounting said filter elements parallel to said pivot axis along a path coaxial to said pivot axis and having first and second end parts, said filter elements extending between said end parts, said first end part facing toward said fluid inlet and rotatably guided along an inside of said filter housing by a seal; and

*a drive being coupled to said receiving part to rotate said receiving part, including a rod- shaped drive part releasably connecting said first and second end parts and including a **pneumatic motor producing alternating to and fro movements on an output part convertible into a constant drive movement in a drive direction of said drive part by a free wheel device.***

13. Sindorf et al. discloses a “backwashing filter (applicant’s filter device) [that] contains a number of independent filter candle elements (applicant’s filter elements) seated in a rotating plate so that each element can be moved into an isolated backwash chamber.” Sindorf et al., Abstract, lines 1-2. Specifically, in Fig. 1, Sindorf et al. teaches a filter housing (filter housing 1) with four filter chambers 11, each containing a filter element (filter insert 12). The Sindorf et al. filter elements are moved in succession from their filtration position into the backwashing

Art Unit: 1797

position and back into the filtration position by means of a pivoting device (Fig. 1, base section 2 and head section 3) connected to a drive (rotary drive 4).

14. As disclosed in Fig. 1, the Sindorf et al. housing (filter housing 1) has a fluid inlet (filter liquid inlet 5), a fluid outlet (filtrate outlet 6), and a back washing fluid outlet (backwashing channel 28). Fig. 1 also teaches that the Sindorf et al. housing contains fluid elements (filter inserts 12) that receive fluid flow outside to in for filtration, and inside to out for backwashing.

15. Sindorf et al. discloses the claimed invention except that the flow is reversed through the filter device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have arranged the Sindorf et al. filter device parts so that flow was reversed through the filter device, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

16. Regarding the pivot device (Fig. 1, base section 2 and head section 3), Sindorf et al. discloses that the pivot device mounts the filter elements (Fig. 1, filter inserts 12) in the housing (Fig. 1, filter housing 1) for sequential rotational movement about a pivot axis (Fig. 1, extends longitudinally along axis 10). Sindorf et al., Translation, ¶ 13, lines 1-4. The pivot device has a rotatably mounted receiving part (Fig. 1, header 3 and footer 2 above and below the filter insert 12) that mounts the filter elements (Fig. 1, filter inserts 12) parallel to and along a path coaxial with the pivot axis (Fig. 1, extends longitudinally along axis 10). Referring to Fig. 1, Sindorf et al. further teaches, "On its outer circumference, the circular perforated plate 17 is rotatably supported in a cylindrical bearing surface 20 of the filter housing 1 by means of a peripheral seal." Sindorf et al., Translation, ¶ 14, lines 7-8. This meets the limitation that the receiving part's first end (Fig. 1, base section 2 just below the filter insert 12) face toward the fluid inlet

Art Unit: 1797

(Fig. 1, filter liquid inlet 5) and that at the first end, the filter elements (Fig. 1, filter inserts 12) be rotatably guided along an inside of the filter housing (Fig. 1, filter housing 1) by a seal ("peripheral seal in a cylindrical bearing face 20 of the filter housing 1," Translation, ¶ 14, line 7).

17. Regarding the drive (Fig. 1, rotary drive 4), Sindorf et al. discloses that the drive is coupled to the receiving part (Fig. 1, header 3 and footer 2 above and below the filter insert 12) to rotate the receiving part. Sindorf et al. further teaches the receiving part includes a rod-shaped drive part (Fig. 1, axis 10), releasably connected, when Sindorf et al. states, "The backwashing filter shown in Figures 1-4 features an approximately cylindrical filter housing 1 that carries a separably connected base section 2 at the base and a head section 3 that is also separably connected." Sindorf et al., Translation, ¶ 12, lines 1-3.

18. The limitation in bold-faced type below has been rejected above for indefiniteness.

a drive being coupled to said receiving part to rotate said receiving part, including a rod- shaped drive part releasably connecting said first and second end parts and including a pneumatic motor producing alternating to and fro movements on an output part convertible into a constant drive movement in a drive direction of said drive part by a free wheel device.

As was stated in that rejection, the examiner is interpreting the limitation to mean (1) the drive (Fig. 1, drive 34) has a pneumatic motor, as stated in the substitute Specification, p. 4, line 11 – and (2) the drive (Fig. 1, drive 34) is coupled to the free wheel device (Fig. 1, free-wheeling device 56) with a driven part (Fig. 1, driven part 54), in keeping with the Specification's Fig. 1.

Art Unit: 1797

19. Sindorf et al. discloses the drive (rotary drive 4) has a pneumatic motor when Sindorf et al. states, "The rotary drive 4 in the form of a compressed gas or compressed air motor is connected to the same compressed gas or compressed air system 38." Sindorf et al., ¶ 18, Translation, lines 12-13. In Fig. 1, Sindorf et al. further teaches that the drive (rotary drive 4) is coupled to the free-wheeling device (center part of plate 17 and the coupler between plate 17 and bearing 21) with a driven part (the coupler between plate 17 and bearing 21).

20. Regarding the functional limitation of the pneumatic motor producing alternating to and fro movements while in use, Sindorf et al. labels this the "percussion effect." Specifically, Sindorf et al. discloses, "In practical applications, a popular choice is backwashing systems with rotary slide valves, in which the backwashing effect is promoted by introducing a compressed gas that usually consists of compressed air and abruptly accelerates the backwashing liquid situated in the filter chamber to be backwashed when a compressed gas valve is opened such that a percussion effect for improving the cleaning efficiency of the backwashing medium is achieved." Sindorf et al., Translation, ¶ 3, lines 10-14.

21. In summary, Sindorf et al. discloses or suggests all claim 11 limitations.

22. Claims 12 and 14 are shown below in italics with the keyed structure from Table 1 underlined.

Claim 12. (new) A filter device according to claim 11 wherein said free wheel device comprises a free wheel sleeve delivering drive power of said drive to said drive part in one direction up to a set torque and not applying drive torque to said drive part in an opposite direction.

Art Unit: 1797

Claim 14. (new) A filter device according to claim 11 wherein said filtered fluid outlet is disposed in a first housing part of said filter housing facing toward said drive; and said filter housing including a second housing part being removable from said first housing part, said second housing part having a cavity above said filter elements toward a free end thereof with an axial extension corresponding approximately to an overall length of each said filter element.

23. Regarding claim 12 – The Sindorf et al. drive is at the top of the filter device and applicant's drive is at the bottom of the filter device. In both cases, the drive (applicant's drive 34, Sindorf et al.'s rotary drive 4) is coupled to a free wheel device (applicant's free-wheeling device 56, Sindorf et al.'s coupling plate 13) with the recited sleeve. In both cases, the power of the drive (applicant's free-wheeling device 56, Sindorf et al.'s coupling plate 13) is delivered by the free wheel device with the recited sleeve (applicant's free-wheeling device 56, Sindorf et al.'s coupling plate 13) to the drive part (applicant's driving part 52, Sindorf et al.'s axis 10).

24. To recap, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have located the Sindorf et al. drive at the bottom of the filter device, instead of the top – and to have accordingly located the Sindorf et al. free wheel device with a sleeve at the bottom of the filter device instead of the top – thus, meeting all claim 12 limitations. This is an example of using a known technique (couple a free wheel device to a drive) to improve similar devices (the Sindorf et al. filter device with the drive at the top, the Sindorf et al. filter device with the drive at the bottom) in the same way, (construct a “backwashing filter [that] contains a number of independent filter candle elements seated in a rotating plate so that each element can be moved into an isolated backwash chamber.” Sindorf et al., Abstract, lines 1-2).

Art Unit: 1797

25. Regarding claim 14 – Sindorf et al. states, " The backwashing filter shown in Figures 1-4 features an approximately cylindrical filter housing 1 that carries a separably connected base section 2 at the base and a head section 3 that is also separably connected." Sindorf et al., Translation, ¶ 12, lines 1-3. As such, the Sindorf et al. fluid outlet is disposed in the first part of the housing (base section 2). The second part of the housing (filter housing 1 excluding base section 2) is removable from the first part of the housing. The second housing part has a cavity above the filter elements (filter inserts 12) and towards the free end of the filter elements. The cavity has an axial extension in the drawings corresponding to less than the recited "overall length of each said filter element."

26. To recap, Sindorf et al. discloses the claimed invention except that the cavity (Fig. 1, cavity 11) above the filter elements (filter inserts 12) corresponds to less than the recited "overall length of each said filter element." It would have been obvious to one having ordinary skill in the art at the time the invention was made to have lengthened the Sindorf et al. cavity to the recited "overall length of each said filter element," since it has been held that if the claimed device and the prior art device do not perform differently, then changing relative dimensions involves only routine skill in the art. *Gardner v. TEC Systems, Inc.*, 220 USPQ 777. In this case, the Sindorf et al. invention functions as a filter device, with filter elements rotating into and out of an isolated backwash chamber via a rotating plate, whether the cavity is the recited "overall length of each said filter element" or less than that.

27. In summary, Sindorf et al. discloses or suggests all limitations recited in claims 12 and 14.

Art Unit: 1797

28. Claim 15 is shown below in italics with the keyed structure from Table 1 underlined.

Claim 15. (new) A filter device according to claim 11 wherein said fluid inlet and said backwash fluid outlet are located in a part of said filter housing extending between said filtered fluid outlet and said drive.

In Fig. 1, Sindorf et al. discloses that the fluid inlet (filter liquid inlet 5) and the backwash fluid outlet (backwashing channel 28) are located in a part of the housing (filter housing 1) extending between the filtered fluid outlet (filtrate outlet 6) and the drive (rotary drive 4).

29. In summary, Sindorf et al. discloses or suggests all claim 15 limitations.

30. Claims 17 and 18 are shown below in italics with the keyed structure from Table 1 underlined.

*Claim 17. (new) A filter device according to claim 11 wherein a lower part of said filter housing comprises an **arcuate-shaped recess** over which several of said filter elements can be located simultaneously in filtration positions thereof with **lower free open cross sections** in fluid communication therewith, said **arcuate-shaped recess** being in fluid communication with said fluid inlet; and said lower part of said filter housing also comprises a **backwash recess** over which said filter elements are sequentially located in said backwashing position with said **free open cross sections** in fluid communication therewith, said **backwash recess** being in fluid communication with said backwash fluid outlet.*

Claim 18. (new) A filter device according to claim 17 wherein exterior surfaces of said filter elements are in fluid communication with one another allowing filtered fluid from

Art Unit: 1797

said filter elements in said filtration positions to flow to and through said filter element in said backwashing position as backwashing fluid.

31. Regarding claim 17 – The three terms in bold-faced type were not previously recited in the previous prosecution history. The terms have now been added to the Table 1 key above. The examiner is interpreting these terms as follows.

- a. The "arcuate-shaped recess" is interpreted to be the "kidney-shaped recess 44." Original Specification, ¶ 22, line 2, Substitute Specification, p. 6, lines 1-4.
- b. The "backwash recess" is interpreted to be opening 48. Original Specification, ¶ 23, lines 1-3; Substitute Specification, p. 7, lines 8-9.
- c. The "lower free open cross section" is interpreted to be the "lower opening cross-section 46." Original Specification, ¶ 22, lines 4-5, Substitute Specification, p. 6, line 5.

32. As can be seen from Table 1 above, Sindorf et al. teaches that the lower housing has recesses over which several filter elements (Fig. 1, filter inserts 12) sit during filtration (Fig. 1, recess under filter insert 12 in filtration mode, i.e. disk opening 18) and during backwash (Fig. 1, Fig. 1, recess under filter insert 12 in backwash mode, i.e. disk opening 18). Claim 17 recites a lower free open cross section 46 that corresponds to a filter element inlet. Sindorf et al. teaches such a filter element inlet (Fig. 1, opening between filter insert 12 and disk opening 18.). In Figs. 1-5, Sindorf et al. further teaches the filter elements in fluid communication with one another, as recited in claim 18. The remaining limitation recited in claims 17 and 18 is that the flow through the filter device is reversed relative to the flow through the Sindorf et al. filter device as disclosed.

Art Unit: 1797

33. Sindorf et al. discloses the claimed invention except that the flow is reversed through the filter device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have arranged the Sindorf et al. filter device parts so that flow was reversed through the filter device, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

34. In summary, Sindorf et al. discloses or suggests all limitations recited in claims 17 and 18.

35. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sindorf et al. (EP0900548A1, Mar. 3, 1999 – Abstract, Patent Publication, Machine Translation) as applied to claim 11 above, in view of Wnuk (U.S. Patent Pub. No. 2003/0213127 A1, Nov. 20, 2003) for the specifics of the filter element.

36. Claim 13 is shown below in italics with the keyed structure from Table 1 underlined.

Claim 13. (new) A filter device according to claim 11 wherein said filter elements are conical and are arranged in pairs opposite one another in each pair relative to said pivot axis, each of said filter elements having an (filter element) inlet opening facing toward said drive.

Claim 16. (new) A filter device according to claim 15 wherein each said filter element comprises a bar screen tube filter element.

37. Claim 16 was rejected above for indefiniteness. In the patentability analysis below, the examiner is interpreting the recited “bar screen tube filter element” to be a tubular wedge-wire

Art Unit: 1797

screen filter element. This has support in the Specification at p. 8, line 28, which states, “The tubular wedge-wire screen filter elements preferably used have support rods.”

38. Regarding claim 13, then – In Fig. 1, Sindorf et al. discloses two pairs of paired filter elements (filter inserts 12), each pair opposite one another relative to the pivot axis (extends longitudinally along axis 10). However, the Sindorf et al. filter elements have an opening facing away from the drive, instead of towards the drive, as recited. As with the claim 12 sleeve location, the filter element opening location is a consequence of the drive being placed at the top of the filter device instead of the bottom. The patentability analysis, then, is analogous.

39. To recap, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have located the Sindorf et al. drive (Fig. 1, rotary 4) at the bottom of the filter device, instead of the top – and to have accordingly located the Sindorf et al. filter element openings (Fig. 1, opening between the filter insert 12 and disk opening 18) facing towards the drive, instead of away from it – thus, meeting all claim 13 limitations. This is an example of using a known technique (couple a free wheel device to a drive) to improve similar devices (the Sindorf et al. filter device with the drive at the top, the Sindorf et al. filter device with the drive at the bottom) in the same way, (construct a “backwashing filter [that] contains a number of independent filter candle elements seated in a rotating plate so that each element can be moved into an isolated backwash chamber.” Sindorf et al., Abstract, lines 1-2).

40. Sindorf et al. discloses the claimed invention except for the conical filter elements [claim 13] that are tubular wedge-wire screen filter elements [claim 16]. Wnuk et al. teaches such tubular wedge-wire screen filter elements in Figs. 1-3. Wnuk et al. further teaches, “The present invention relates to a process for production of conical or frustoconical filter elements, slotted

Art Unit: 1797

tube filter elements in particular. The support structure of the filter element is formed of a plurality of support rods around which at least one wire profile is wound in individual turns.

Slots are left clear in the wire profile through which a fluid may pass.” Wnuk et al., ¶ 1, lines 1-

7. Wnuk et al. discloses that such a filter element "is simple and cost-effective and which achieves improved filtration results" because "the overall structure is very rigid and the filter screen is more or less self-supporting to increase the overall stability of the filter element."

Wnuk et al., ¶ 5, lines 2-5 and ¶ 8, lines 1-4. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sindorf et al. filter element a conical [claim 13], wedge-wire screen filter element [claim 16] as taught by Wnuk et al., since Wnuk et al., states at ¶ 5, lines 2-5 and ¶ 8, lines 1-4, that such a modification would produce a filter element that "is simple and cost-effective and which achieves improved filtration results" because "the overall structure is very rigid and the filter screen is more or less self-supporting to increase the overall stability of the filter element."

41. In summary, Sindorf et al., in view of Wnuk for the specifics of the filter element, discloses or suggests all limitations recited in claims 13 and 16.

Claim Rejections - 35 USC § 103
Filter Device Recited in Claims 19-25

42. Claims 19, 20, 22, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sindorf et al. (EP0900548A1, Mar. 3, 1999 – Abstract, Patent Publication, Translation).

43. Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sindorf et al. (EP0900548A1, Mar. 3, 1999 – Abstract, Patent Publication, Machine Translation) as

Art Unit: 1797

applied to claim 11 above, in view of Wnuk (U.S. Patent Pub. No. 2003/0213127 A1, Nov. 20, 2003) for the specifics of the filter element.

44. Applicant recited the same limitations in claims 19-25 that were recited in claims 11-19 but arranged differently. From the patentability analysis above:

- a. Claims 11, 12, 14, 15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sindorf et al. (EP0900548A1, Mar. 3, 1999 – Abstract, Patent Publication, Translation).
- b. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sindorf et al. (EP0900548A1, Mar. 3, 1999 – Abstract, Patent Publication, Machine Translation) as applied to claim 11 above, in view of Wnuk (U.S. Patent Pub. No. 2003/0213127 A1, Nov. 20, 2003) for the specifics of the filter element.

Table 2 below keys the limitations in claims 19-25 to those of claims 11-19 and the consequent rejection.

Table 2: Claims 19-25 limitations keys to those of claims 11-18, and consequent rejections.		
<i>Claim number</i>	<i>Keyed to previous claims.</i>	<i>Consequent rejection.</i>
19	Claims 11 and 17.	35 U.S.C. 103(a) over Sindorf et al.
20	Claims 19 and 12.	35 U.S.C. 103(a) over Sindorf et al.
21	Claims 19 and 13.	35 U.S.C. 103(a) over Sindorf et al., in view of Wnuk.
22	Claims 19 and 14.	35 U.S.C. 103(a) over Sindorf et al.
23	Claims 19 and 15.	35 U.S.C. 103(a) over Sindorf et al.
24	Claims 19 and 16.	35 U.S.C. 103(a) over Sindorf et al., in view of Wnuk.
25	Claims 19 and 17.	35 U.S.C. 103(a) over Sindorf et al.

45. In summary, Sindorf et al. discloses or suggests all limitations recited in claims 19, 20, 22, 23, and 25. Sindorf et al., in view of Wnuk for the specifics of the filter element, discloses or suggests all limitations recited in claims 21 and 24.

Art Unit: 1797

46. Claims 19-25 are shown below in italics with the keyed structure from Table 1 underlined.

Claim 19. (new) A filter device, comprising:

a filter housing having an unfiltered fluid inlet, a filtered fluid outlet and a backwash fluid outlet;

filter elements in said housing receiving fluid flow in one direction for filtration and in an opposite direction for backwashing effective filter surfaces thereof;

a pivoting device mounting said filter elements in said filter housing for sequential rotational movement about a pivot axis between filtration positions in which unfiltered fluid flows from inside to outside through said filter elements and a backwashing position in which filtered fluid flows from outside to inside through said filter elements, said pivot(ing) device having a rotatably mounted receiving part mounting said filter elements parallel to said pivot axis along a path coaxial to said pivot axis and having first and second end parts, said filter elements extending between said end parts, said first end part facing toward said fluid inlet and rotatably guided along an inside of said filter housing by a seal;

a drive being coupled to said receiving part to rotate said receiving part; and

*a lower part of said filter housing having an **arcuate-shaped recess** over which several of said filter elements can be located simultaneously in filtration positions thereof with lower **free open cross sections** in fluid communication therewith and having a **backwash recess** over which said filter elements are sequentially located in said backwashing position with said **free open cross sections** in fluid*

Art Unit: 1797

*communication therewith, said **arcuate-shaped recess** being in fluid communication with said fluid inlet, said **backwash recess** being in fluid communication with said backwash fluid outlet.*

Claim 20. (new) A filter device according to claim 19 wherein

said free wheel device comprises a free wheel sleeve delivering drive power of said drive to said drive part in one direction up to a set torque and not applying drive torque to said drive part in an opposite direction.

Claim 21. (new) A filter device according to claim 19 wherein

said filter elements are conical and are arranged in pairs opposite one another in each pair relative to said pivot axis, each of said filter elements having an (filter element) inlet opening facing toward said drive.

Claim 22. (new) A filter device according to claim 19 wherein

said filtered fluid outlet is disposed in a first housing part of said filter housing facing toward said drive; and
said filter housing including a second housing part being removable from said first housing part, said second housing part having a cavity above said filter elements toward a free end thereof with an axial extension corresponding approximately to an overall length of each said filter element.

Art Unit: 1797

*Claim 23. (new) A filter device according to claim 19 wherein
said fluid inlet and said backwash fluid outlet are located in a part of said filter
housing extending between said filtered (fluid) outlet and said drive.*

*Claim 24. (new) A filter device according to claim 22 wherein
each said filter element comprises a bar screen tube filter element.*

*Claim 25. (new) A filter device according to claim 19 wherein
exterior surfaces of said filter elements are in fluid communication with one another
allowing filtered fluid from said filter elements in said filtration positions to flow
to and through said filter element in said backwashing position as backwashing
fluid.*

Response to Arguments

47. Arguments filed August 12, 2009 have been fully considered but they are not persuasive.

48. Applicant's arguments are listed below with the examiner's response after each argument.

- a. Regarding claim 11, applicant argues, "The Sindorf drive arrangement does not appear to rotate a receiving part holding the filter element where the drive includes a rod-shaped drive part releasably connecting the first and second end parts with a free wheel device" because "[T]he longitudinal axis 10 referred to does not appear to be

Art Unit: 1797

part of the Sindorf drive and does not provide a releasable connection." Applicant's Remarks, p. 13, lines 19-21.

The limitation appears below.

*a drive being coupled to said receiving part to rotate said receiving part,
including a rod- shaped drive part releasably connecting said first and second
end parts*

The examiner responds as in the above patentability analysis. Regarding the drive (Fig. 1, rotary drive 4), Sindorf et al. discloses that the drive is coupled to the receiving part (Fig. 1, header 3 and footer 2 above and below the filter insert 12) to rotate the receiving part. Sindorf et al. further teaches the receiving part includes a rod-shaped drive part (Fig. 1, axis 10), releasably connected, when Sindorf et al. states, " The backwashing filter shown in Figures 1-4 features an approximately cylindrical filter housing 1 that carries a separably connected base section 2 at the base and a head section 3 that is also separably connected." Sindorf et al., Translation, ¶ 12, lines 1-3.

- b. Regarding claim 11, applicant argues, "[T]he filtering and backwash flow through the Sindorf filter elements 12 is opposite to that claimed." Applicant's Remarks, p. 14, lines 1-2.

The examiner responds as in the above patentability analysis. 15. Sindorf et al. discloses the claimed invention except that the flow is reversed through the filter device. It would have been obvious to one having ordinary skill in the art at the time

Art Unit: 1797

the invention was made to have arranged the Sindorf et al. filter device parts so that flow was reversed through the filter device, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

- c. Regarding claim 11, applicant argues, “[A] separate fluid compressed over is used for backwashing, not filtered fluid from the filter elements, as claimed.” Applicant’s Remarks, p. 14, lines 2-3.

These are apparatus claims. MPEP 2115 [R-2] states that a material worked upon does not limit the apparatus claims. The cited case law follows. “Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, “[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims.” *In re Young*, 75 F.2d, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

- d. Regarding claim 11, applicant argues, “Claim 11 is also distinguished by the first end part facing the inlet and rotatably guided from the inside surface by a seal. The Sindorf header 3 and footer 3, alleged to correspond to the claimed end parts, do not have one thereof facing its unfiltered fluid inlet 5 and do not have the filter element extending between them.” Applicant’s Remarks, p. 14, lines 4-7.

The limitation under discussion follows.

*said filter elements extending between said end parts, said first end part
facing toward said fluid inlet and rotatably guided along an inside of said
filter housing by a seal;*

The examiner responds as in the above patentability analysis. The relevant part of Table 1 appears below.

TABLE 1: KEYING CLAIMED STRUCTURE TO PRIOR ART.		
<i>Claimed Structure in Original Specification</i>	<i>Claimed Structure in Substitute Specification</i>	<i>Prior Art.</i>
<i>Filter elements</i> (28).	<i>Filter elements</i> – Fig. 1, filter elements 28.	<i>Filter elements</i> – Sindorf et al., Fig. 1, filter insert 12.
<i>Filter housing</i> (10).	<i>Housing</i> – Fig. 1, filter housing 10.	<i>Housing</i> – Sindorf et al., Fig. 1, filter housing 1.
<i>Filter inlet</i> (20).	<i>Fluid inlet</i> – Fig. 1, filter inlet 20.	<i>Fluid inlet</i> – Sindorf et al., Fig. 1, filter liquid inlet 5.
<i>Receiving element</i> (32).	<i>Receiving part</i> – Fig. 1, receiving element 32.	<i>Receiving part</i> – Sindorf et al., Fig. 1, head section 3 and base section 2 above and below the filter insert 12.
<i>End parts</i> (38, 40).	<i>End parts</i> – Fig. 1, end parts 38, 40.	<i>End parts</i> – Sindorf et al., Fig. 1, head 3 and footer 2 that are just above and just below the filter insert 12.
<i>Sealing means</i> (42).	<i>Seal</i> – Fig. 1, sealing means or seal 42.	<i>Seal</i> – Sindorf et al., Fig. 1, “peripheral seal in a cylindrical bearing face 20 of the filter housing 1,” Translation, ¶ 14, line 7.

The pivot device has a rotatably mounted receiving part (Fig. 1, header 3 and footer 2 above and below the filter insert 12) that mounts the filter elements (Fig. 1, filter inserts 12) parallel to and along a path coaxial with the pivot axis (Fig. 1, extends longitudinally along axis 10). Referring to Fig. 1, Sindorf et al. further teaches, “On its outer circumference, the circular perforated plate 17 is rotatably supported in a cylindrical bearing surface 20 of the filter housing 1 by means of a peripheral seal.” Sindorf et al., Translation, ¶ 14, lines 7-8. This meets the limitation that the receiving part’s first end (Fig. 1, base section 2 just below the filter insert 12)

Art Unit: 1797

face toward the fluid inlet (Fig. 1, filter liquid inlet 5) and that at the first end, the filter elements (Fig. 1, filter inserts 12) be rotatably guided along an inside of the filter housing (Fig. 1, filter housing 1) by a seal ("peripheral seal in a cylindrical bearing face 20 of the filter housing 1," Translation, ¶ 14, line 7).

- e. Regarding claim 19, applicant argues, "Claim 18 (applicant meant claim 19) is further distinguishable by the Sindorf patent by the arcuate-shaped recesses by which the fluid inlet is in fluid communication with the inside of the filter elements in the filtration positions simultaneously. In contrast, no arcuate-shaped recess is provided in the Sindorf system." Applicant's Remarks, p. 15, lines 7-10. Applicant further argues, "Claim 17 is further distinguishable by the arcuate-shaped recess for the reasons discussed above relative to claim 19." Applicant's Remarks, p. 16, lines 11-12.

The limitation under discussion is shown in bold-faced type below.

a lower part of said filter housing having an arcuate-shaped recess over which several of said filter elements can be located simultaneously in filtration positions thereof with lower free open cross sections in fluid communication therewith and having a backwash recess over which said filter elements are sequentially located in said backwashing position with said free open cross sections in fluid communication therewith, said arcuate-shaped recess being in fluid communication with said fluid inlet, said backwash recess being in fluid communication with said backwash fluid outlet.

The examiner responds as in the above patentability analysis. The relevant part of Table 1 appears below.

TABLE 1: KEYING CLAIMED STRUCTURE TO PRIOR ART.		
<i>Claimed Structure in Original Specification</i>	<i>Claimed Structure in Substitute Specification</i>	<i>Prior Art.</i>
<i>Filter elements</i> (28).	<i>Filter elements</i> – Fig. 1, filter elements 28.	<i>Filter elements</i> – Sindorf et al., Fig. 1, filter insert 12.
<i>Inlet opening</i> (46).	<i>Inlet opening</i> – Fig. 1, inlet opening 46.	<i>Inlet opening</i> – Sindorf et al., Fig. 1, opening between filter insert 12 and disk opening 18.
	<i>Arcuate-shaped recess</i> – Fig. 1, kidney-shaped recess 44. <i>Backwash recess</i> – Fig. 1, opening 48. <i>Lower free open cross-section</i> – Fig. 1, lower opening cross section 46.	<i>Arcuate-shaped recess</i> – Sindorf et al., Fig. 1, recess under filter element in filtration mode, i.e. disk opening 18. <i>Backwash recess</i> – Sindorf et al., Fig. 1, recess under filter element in backwash mode, i.e. disk opening 18. <i>Lower free open cross-section</i> – Sindorf et al., Fig. 1, opening between filter insert 12 and disk opening 18.
<i>Filter housing</i> (10).	<i>Housing</i> – Fig. 1, filter housing 10.	<i>Housing</i> – Sindorf et al., Fig. 1, filter housing 1.
<i>Filter inlet</i> (20).	<i>Fluid inlet</i> – Fig. 1, filter inlet 20.	<i>Fluid inlet</i> – Sindorf et al., Fig. 1, filter liquid inlet 5.
<i>Filter outlet</i> (22).	<i>Fluid outlet</i> – Fig. 1, filter outlet 22.	<i>Fluid outlet</i> – Sindorf et al., Fig. 1, filtrate outlet 6.
<i>Fluid outlet</i> (26).	<i>Backwash fluid outlet</i> – Fig. 1, fluid outlet (26).	<i>Backwash fluid outlet</i> – Sindorf et al., Fig. 1, back washing channel 28.

As can be seen from the relevant part of Table 1 above, Sindorf et al. teaches that the lower housing has recesses over which several filter elements (Fig. 1, filter inserts 12) sit during filtration (Fig. 1, recess under filter insert 12 in filtration mode, i.e. disk opening 18) and during backwash (Fig. 1, Fig. 1, recess under filter insert 12 in backwash mode, i.e. disk opening 18). Claim 19 recites a lower free open cross section 46 that corresponds to a filter element inlet. Sindorf et al. teaches such a filter element inlet (Fig. 1, opening between filter insert 12 and disk opening 18). The last limitation recited in claim 19 requires that the flow through the filter device is

Art Unit: 1797

reversed relative to the flow through the Sindorf et al. filter device as disclosed, i.e. “said arcuate-shaped recess being in fluid communication with said fluid inlet.”

Sindorf et al. discloses the claimed invention except that the flow is reversed through the filter device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have arranged the Sindorf et al. filter device parts so that flow was reversed through the filter device, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

- f. Regarding claims 12 and 20, applicant argues, “Claims 12 and 20 are further distinguishable by the free wheel device having a free wheel sleeve” because “[s]uch arrangement is not shown to be disclosed or rendered obvious by the Sindorf patent.” Applicant’s Remarks, p. 15, lines 16-19.

Claims 12 and 20 are listed below.

Claim 12. (new) A filter device according to claim 11 wherein said free wheel device comprises a free wheel sleeve delivering drive power of said drive to said drive part in one direction up to a set torque and not applying drive torque to said drive part in an opposite direction.

Claim 20. (new) A filter device according to claim 19 wherein said free wheel device comprises a free wheel sleeve delivering drive power of said drive to said drive part in one direction up to a set torque and not applying drive torque to said drive part in an opposite direction.

The examiner responds as in the above patentability analysis. The relevant part of Table 1 appears below.

TABLE 1: KEYING CLAIMED STRUCTURE TO PRIOR ART.		
<i>Claimed Structure in Original Specification</i>	<i>Claimed Structure in Substitute Specification</i>	<i>Prior Art.</i>
<i>Filter device</i> , Fig. 1.	<i>Filter device</i> , Fig. 1.	<i>Filter device</i> – Sindorf et al., Fig. 1.
<i>Pivoting device</i> (30).	<i>Pivoting device</i> – Fig. 1, pivoting device 30.	<i>Pivoting device</i> – Sindorf et al., Fig. 1, base section 2 and head section 3.
<i>Pivoting axis</i> (36).	<i>Pivot axis</i> – Fig. 1, pivoting axis 36.	<i>Pivot axis</i> – Sindorf et al., Fig. 1, extends longitudinally along axis 10.
<i>Receiving element</i> (32).	<i>Receiving part</i> – Fig. 1, receiving element 32.	<i>Receiving part</i> – Sindorf et al., Fig. 1, head section 3 and base section 2 above and below the filter insert 12.
<i>End parts</i> (38, 40).	<i>End parts</i> – Fig. 1, end parts 38, 40.	<i>End parts</i> – Sindorf et al., Fig. 1, head 3 and footer 2 that are just above and just below the filter insert 12.
<i>Drive part</i> (52).	<i>Drive part</i> – Fig. 1, rod-like drive part 52.	<i>Drive part</i> – Sindorf et al., Fig. 1, axis 10.
<i>Free-wheeling device</i> (56).	<i>Free-wheel device</i> – Fig. 1, free-wheeling means 56 with free-wheeling sleeve 56a.	<i>Free-wheel device</i> – Sindorf et al., Fig. 1, center part of plate 17 and the coupler between plate 17 and bearing 21.
<i>Drive</i> (34).	<i>Drive</i> – Fig. 1, drive or motor 34.	<i>Drive</i> – Sindorf et al., Fig. 1, rotary drive 4.
<i>Driven part</i> (54).		<i>Driven part</i> – Sindorf et al., Fig. 1, the coupler between plate 17 and bearing 21.

The Sindorf et al. drive is at the top of the filter device and applicant's drive is at the bottom of the filter device. In both cases, the drive (applicant's drive 34, Sindorf et al.'s rotary drive 4) is coupled to a free wheel device (applicant's free-wheeling device 56, Sindorf et al.'s coupling plate 13) with the recited sleeve. In both cases, the power of the drive (applicant's free-wheeling device 56, Sindorf et al.'s coupling plate 13) is delivered by the free wheel device with the recited sleeve (applicant's free-wheeling device 56, Sindorf et al.'s coupling plate 13) to the drive part (applicant's driving part 52, Sindorf et al.'s axis 10).

To recap, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have located the Sindorf et al. drive at the bottom of the filter device, instead of the top – and to have accordingly located the Sindorf et al. free wheel device with a sleeve at the bottom of the filter device instead of the top – thus, meeting all limitations recited in claims 12 and 20. This is an example of using a known technique (couple a free wheel device to a drive) to improve similar devices (the Sindorf et al. filter device with the drive at the top, the Sindorf et al. filter device with the drive at the bottom) in the same way, (construct a “backwashing filter [that] contains a number of independent filter candle elements seated in a rotating plate so that each element can be moved into an isolated backwash chamber.” Sindorf et al., Abstract, lines 1-2).

- g. Regarding claims 13 (and 21) and 16 (and 24), applicant argues, “Claims 13 and 21 are further distinguishable by the filter elements being conical and arranged in pairs where the filter elements of each pair being diametrically opposite one another within the overall claimed construction.” Applicant's Remarks, p. 15, lines 20-22. Applicant further argues, “Claims 16 and 24 are further distinguished by the filter element comprising a bar screen tube filter element within the overall claimed combination.” Applicant's Remarks, p. 16, lines 9-10.

The examiner responds as in the above patentability analysis. See paragraphs 35-41.

Art Unit: 1797

- h. Regarding claims 14 and 22, applicant argues that the claims recite a cavity and, “[N]o such cavity is disclosed or rendered obvious by the Sindorf patent.”

Applicant's Remarks, p. 16, lines 1-3.

The limitation being discussed appears below.

second housing part having a cavity above said filter elements toward a free end thereof

The examiner responds as in the above patentability analysis. In Fig. 1, Sindorf et al. discloses that the second part of the housing (filter housing 1 excluding base section 2) has a cavity above the filter elements (filter inserts 12) and towards the free end of the filter elements.

- i. Regarding claims 15 and 23, applicant argues, “Claims 15 and 23 are further distinguishable by the fluid inlet and the backwash fluid outlet being located . . . between the filtered fluid outlet and the drive. Such orientation is not disclosed or rendered obvious, particularly since the Sindorf drive is located at the top of the filter housing remote from the fluid inlet 5 and the backwash outlet 8.” Applicant’s Remarks, p. 16, lines 4-8.

Claims 15 and 23 are shown below.

Claim 15. (new) A filter device according to claim 11 wherein said fluid inlet and said backwash fluid outlet are located in a part of said filter housing extending between said filtered fluid outlet and said drive.

Claim 23. (new) A filter device according to claim 19 wherein

Art Unit: 1797

said fluid inlet and said backwash fluid outlet are located in a part of said filter housing extending between said filtered (fluid) outlet and said drive.

The examiner responds as in the above patentability analysis. In Fig. 1, Sindorf et al. discloses that the fluid inlet (filter liquid inlet 5) and the backwash fluid outlet (backwashing channel 28) are located in a part of the housing (filter housing 1) extending between the filtered fluid outlet (filtrate outlet 6) and the drive (rotary drive 4). In summary, Sindorf et al. discloses or suggests all limitations recited in claims 15 and 23.

- j. Regarding claims 18 and 25, applicant argues, “Claims 18 and 25 are further distinguishable by the exterior surfaces of the filter elements being in fluid communication to allow filtered fluid to be used as backwashing fluid. In the Sindorf device, the exterior of the filter element in the backwashing position is isolated from and is not in fluid communication with the exteriors of the other filter elements.”

Applicant's Remarks, p. 16, lines 13-16.

Claims 18 and 25 are shown below.

Claim 18. (new) A filter device according to claim 17 wherein exterior surfaces of said filter elements are in fluid communication with one another allowing filtered fluid from said filter elements in said filtration positions to flow to and through said filter element in said backwashing position as backwashing fluid.

Claim 25. (new) A filter device according to claim 19 wherein exterior surfaces of said filter elements are in fluid communication with one another allowing filtered fluid from said filter elements in said filtration positions to flow to and through said filter element in said backwashing position as backwashing fluid.

The examiner responds as in the above patentability analysis. In Figs. 1-5, Sindorf et al. teaches the filter elements in fluid communication with one another, as recited in claim 18 (and claim 25). The remaining limitation requires that the flow through the filter device is reversed relative to the flow through the Sindorf et al. filter device as disclosed.

Sindorf et al. discloses the claimed invention except that the flow is reversed through the filter device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have arranged the Sindorf et al. filter device parts so that flow was reversed through the filter device, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

In summary, Sindorf et al. discloses or suggests all limitations recited in claims 18 and 25.

Conclusion

49. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

50. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

51. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise R. Anderson whose telephone number is (571)270-3166. The examiner can normally be reached on Monday through Thursday, from 8:00 am to 6:00 pm.

52. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter D. Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

53. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1797

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/DRA/

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797